


# TOSOT

Multi **ULTRA** Ductless heat-pump systems 18,000 BTU

Submittal Data: TM18H50		Inverter Heat Pump System	
Job Name	Location	Date	
Purchaser	Engineer		
Submitted To	For	<input type="checkbox"/> Reference	<input type="checkbox"/> Approval <input type="checkbox"/> Construction
Unit Designation	Schedule No.		
<b>GENERAL FEATURES</b> -Dual Indoor Units (2-Port) -G10 DC Inverter Technology - 2 Stage / 3 Cylinder -Automatic Defrosting -Compressor/Chassis Heaters -Copper Tubing w/ Acrylic-Resin Coated Aluminum Fins -Intelligent Defrost -Auto Restart on Power Outages -Mult-point Diagnostics -Limited 5 yr Parts & Compressor Warranty-Residential Only		 <a href="http://TosotComfort.com">TosotComfort.com</a>	
System Ratings		Outdoor Unit Data	
Rated Cooling Capacity	18,000 BTUH	<b>Compressor</b> Type	DC Inverter Driven Rotary
Cooling Capacity (min-max)	6,998-21,001 BTUH	RLA	14.9 A
Rated Heating Capacity	21,000 BTUH	Starting Current	5.0 A
Heating Capacity (min-max)	7,000-26,000 BTUH	<b>Fan Motor</b> Output Power	90 W
SEER/EER	23.0 / 12.5	FLA	0.4 A
HSPF/COP	10.5 / 3.6	Air Flow (Max)	2531 CFM
<b>Operating Range</b>		<b>Sound Pressure Level</b>	
Cooling - Low/High Ambient	(min-max) 0 ~ 118°F -18 ~ 48°C	Cooling	58 dB(A)
Heating - Low Ambient (ULTRA)	(min-max) -31 ~ 75°F -35 ~ 24°C	Heating	58 dB(A)
<b>Power Supply</b>		<b>Dimensions &amp; Weights</b>	
Normal Operational Voltage	208/230 V, 1 Phase, 60 Hz	Unit Dimensions Overall (WxDxH)*	39.5 x 16.8 x 31.1-in
Voltage Range	187 - 253 V	* including Valve Covers and Grilles	
Main Power Wire Size	10-2 AWG	Weight (Net/Shipping)	172/183 lbs
Interconnecting Cable Wire Size	14-4 AWG	<b>Refrigerant Piping Data</b>	
MCA	23.0 A	Refrigerant Type	R410A
MOCP/Breaker Size	35 A	Refrigerant Charge	77.6 oz
		Additional Charge Per Line Length	0.2-oz/ft
		Connection Method-Flared	1/4x3/8-in
		Factory Charge for Total Line Length	66-ft
		Total Refrigerant Pipe Length	164-ft
		Max Refrigerant Piping Length to any Indoor Unit	82-ft
		Min Refrigerant Piping Length to any Indoor Unit	10-ft
		Max Elevation between Indoor Units	26-ft
		Max Lift from Outdoor to Indoor Unit	26-ft
		Max Drop from Outdoor to Indoor Unit	26-ft



SYSTEM FEATURES	
Compressor Type	Inverter Rotary
Core Technology Three Cylinder Two Stage Compressor	G10
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Refrigerant Type	R410A
Electronic Expansion Valve (EEV)	2
Basepan With Electric Heater	YES
Compressor Preheat	YES
Compressor With Electric Heater (-40°F)	YES
-40°F Wiring UL Approved	YES
Multi "Independent" Port Design	YES
Condenser Fan	Axial
Condenser Motor Type	DC
Condenser Motor Drive	Direct
Condenser Coil	Aluminum Fin/Copper Tube
Outdoor Fin Coating (Blue)	Acrylic Resin
Intelligent Defrosting	YES
Low Voltage Startup	YES
Memory/Power Failure Recovery	YES
Self Diagnosis	YES
Ultra Heating (-31°F - 75°F)	YES
Ultra Cooling (0°F - 118°F)	YES
XK19 Wired Controller Interface	YES

REMOTE CONTROLLER FUNCTIONS <sup>1</sup>	See individual Indoor Unit Controllers Functions
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<sup>1</sup> Not all Remote Controller functions are supported.

XK19 WIRED CONTROLLER FUNCTIONS <sup>2</sup>	
On/Off	YES
Operating Mode	YES
Fan Speed	YES
Room Setpoint	YES
Model Numbers	YES
Timer Mode	YES
Sleep Mode	YES
Turbo Mode	YES
X-Fan Mode	YES
Privacy Lock	YES

<sup>2</sup> Note: Some indoor models may not support specific system features or functions.

# DIMENSIONAL SPECIFICATIONS

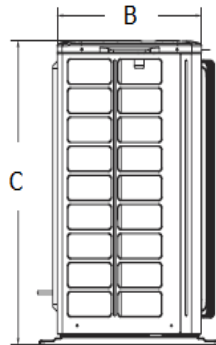
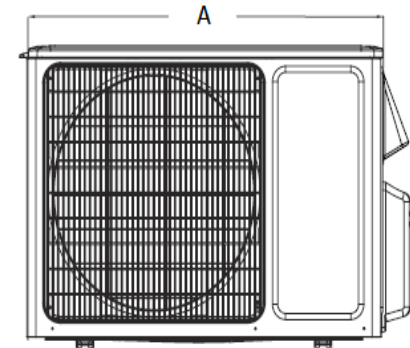
# TM18H50

## 18,000 BTUH MODEL

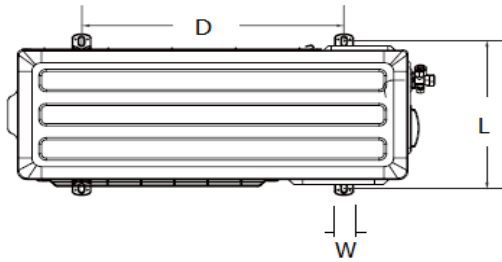
Model # TM18H50 18,000 BTUH 230V

Units: inch

Units: inch



A (in)	36.2
B (in)	14.6
C (in)	31.1



D (in)	24.0
L (in)	15.6
W (in)	2.4

Weight (Net/Shipping)	172/183 lbs
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### Suction/Gas Line Port Size

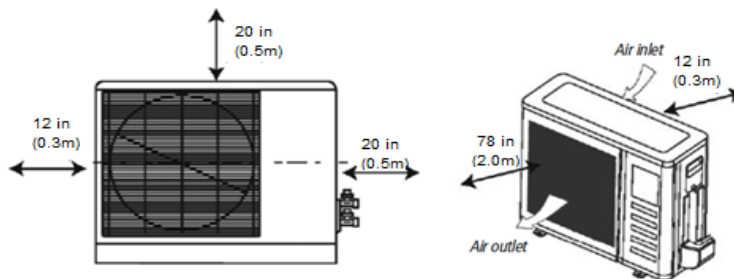
Port #1	3/8-in OD Flared
Port #2	3/8-in OD Flared

### Liquid Line Port Size

Port #1	1/4-in OD Flared
Port #2	1/4-in OD Flared

## MINIMUM SPACING REQUIREMENTS

Units: inch (m)



### Notes:

1. Recommended Interconnecting Cable Type Stranded Copper Conductors THHN 600V Unshielded Wire
2. Power wiring cable size must comply with applicable national and local codes.
3. Test conditions are based on AHRI 210/240.

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**EXTENDED RATINGS**

**TM18H50**

**ULTRA COOL**

**COOLING PERFORMANCE (BtuH)\***

Outdoor Ambient Temperature (DB) °F	Indoor Entering Air Temperatures					
	68°F DB		73°F DB		80°F DB	
	57°F WB		61°FWB		67°FWB	
	TC	SHC	TC	SHC	TC	SHC
0°F	11182	8769	11822	9262	13018	10214
5°F	11573	9076	12235	9586	13473	10571
14°F	12122	9507	12806	10040	14453	11336
23°F	13281	10418	14206	11143	16277	12766
32°F	14113	11069	14909	11693	16826	13193
41°F	14620	11467	15440	12109	17644	13835
50°F	14875	11666	15910	12478	18230	14294
59°F	16106	12631	17227	13510	18867	14793
68°F	18240	14306	19380	15197	20710	16243
77°F	18025	14139	19171	15037	20520	16096
86°F	17138	13440	18278	14338	19950	15647
95°F	16220	12721	17353	13607	19000	14902
104°F	15434	12105	16562	12991	18506	14517
113°F	15035	11791	16169	12676	18113	14203

**ULTRA HEAT**

**HEATING PERFORMANCE (BtuH)\***

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures								
	68°F DB			73°F DB			80°F DB		
	57°FWB			61°FWB			67°FWB		
	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP	TC	Power Input (KW)	COP
-31°F	16500	4.80	1.01	16300	4.65	1.03	15900	4.63	1.01
-22°F	18902	4.89	1.13	18401	4.94	1.09	18030	4.95	1.07
-13°F	20698	4.96	1.22	20160	5.01	1.18	19762	5.02	1.15
-5°F	22479	3.28	2.01	21906	3.32	1.93	21482	3.43	1.84
0°F	22148	3.34	1.94	21565	3.38	1.87	21130	3.49	1.78
5°F	22251	3.17	2.06	21672	3.21	1.98	21245	3.31	1.88
10°F	22498	3.20	2.06	21913	3.24	1.98	21475	3.34	1.88
17°F	22072	3.18	2.03	21492	3.22	1.96	21053	3.32	1.86
19°F	21778	2.97	2.15	21478	3.01	2.09	21036	3.10	1.99
24°F	21108	3.08	2.01	20856	3.11	1.96	20478	3.21	1.87
32°F	20566	2.95	2.05	20339	2.98	2.00	20008	3.07	1.91
41°F	21375	2.73	2.30	21165	2.76	2.25	20848	2.84	2.15
43°F	21960	2.13	3.02	21750	2.16	2.96	21440	2.22	2.82
47°F	24000	2.18	3.23	23340	2.20	3.10	22846	2.27	2.94
53°F	24240	1.98	3.59	23573	2.00	3.45	23079	2.07	3.27
59°F	22316	2.00	3.27	21695	2.02	3.14	21236	2.09	2.98
64°F	22788	1.83	3.64	22160	1.85	3.50	21695	1.91	3.32
70°F	23220	1.86	3.66	22579	1.88	3.51	22100	1.94	3.33
75°F	23544	1.70	4.06	22896	1.72	3.90	22417	1.78	3.70
78°F	23760	1.72	4.06	23105	1.74	3.90	22619	1.79	3.70

\* Maximum system capacity

TC- Total Capacity ( BtuH)

COP- Coefficient of Performance

**ULTRA HEAT**

**ULTRA COOL**

**COOLING CAPACITY (BTUH)**

Indoor Units Combinations	Rated System Capacity (BtuH)	Indoor Unit A (BtuH)	Indoor Unit B (BtuH)	Indoor Unit C (BtuH)	Indoor Unit D (BtuH)
9K+9K	18,000	9,000	9,000	NA	NA
9K+12K	20,000	9,000	11,000	NA	NA
12K+12K	21,000	10,500	10,500	NA	NA

**HEATING CAPACITY (BTUH)**

Indoor Units Combinations	Rated System Capacity	Indoor Unit A	Indoor Unit B	Indoor Unit C	Indoor Unit D
12K			NA	NA	NA
9K+9K	21,000	10,500	10,500	NA	NA
9K+12K	22,000	10,000	12,000	NA	NA
12K+12K	26,000	13,000	13,000	NA	NA

Capacity data is based on the following conditions :

Cooling Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Outdoor: 95°F DB/75°F WB

Heating Nominal Test Conditions

Indoor: 70°F DB/60°F WB

Outdoor: 47°F DB/43°F W

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